Contents

Number 1 July 1991	
President's Page	
On Practice Guidelines	1
Robert W. Jamplis, MD	
Editorials	
Bilateral Internal Thoracic Artery Grafting in Reoperations	3
Floyd D. Loop, MD, Bruce W. Lytle, MD, and Delos M. Cosgrove, MD	
The STS National Database: Alive, Well, and Growing	5
Richard E. Clark, MD	
Original Articles	
Clinical Spectrum of Bronchogenic Cysts of the Mediastinum and Lung in the Adult	6
Régent St-Georges, MD, Jean Deslauriers, MD, André Duranceau, MD, Rosaire Vaillancourt, MD, Claude Deschamps, MD, Gilles Beauchamp, MD, Arthur Pagé, MD, and Jacques Brisson, MD	
Triiodothyronine-Enhanced Left Ventricular Function After Ischemic Injury	14
Cornelius M. Dyke, MD, Thomas Yeh, Jr, MD, Jonathan D. Lehman, BS, Anwar Abd-Elfattah, PhD, Mai Ding, MD, Andrew S. Wechsler, MD, and David R. Salter, MD	
Bilateral Internal Mammary Artery Grafts in Reoperative and Primary Coronary Bypass Surgery	20
David L. Galbut, MD, Ernest A. Traad, MD, Malcolm J. Dorman, MD, Paul L. DeWitt, MD, Parry B. Larsen, MD, Paul A. Kurlansky, MD, Jaclyn H. Button, MS, Joan M. Ally, ARNP, and Thomas O. Gentsch, MD	
Complete Repair of Atrioventricular Septal Defect	29
Walter H. Merrill, MD, John W. Hammon, Jr, MD, Thomas P. Graham, Jr, MD, and Harvey W. Bender, Jr, MD	
Atrioventricular Septal Defect Repair in Infants	33
Steven C. Bailey, MD, and Donald C. Watson, MD	
Composite Graft Repair of Marfan Aneurysm of the Ascending Aorta: Results in 100 Patients	38
Vincent L. Gott, MD, Reed E. Pyeritz, MD, PhD, Duke E. Cameron, MD, Peter S. Greene, MD, and Victor A. McKusick, MD	

Cardiopulmonary Bypass and Thyroid Function: A "Euthyroid Sick Syndrome"	46
Fred W. Holland II, MD, Paul S. Brown, Jr, MD, Bruce D. Weintraub, MD, and Richard E. Clark, MD	
Effect of Lung Contusion on Pulmonary Hemodynamics	51
Robert B. Wagner, MD, Benjamin Slivko, MD, Peter M. Jamieson, MD, Mark S. Dills, MA, PA, and Fred H. Edwards, MD	
Ultrasonic Decalcification of the Aortic Annulus During Aortic Valve Replacement	59
Barry B. Sheppard, MD, Jeffrey C. Milliken, MD, Ronald J. Nelson, MD, David M. Follette, MD, and John M. Robertson, MD	
Mitral Valve Repair in the Extensively Calcified Mitral Valve Annulus	66
Bechara El Asmar, MD, Michael Acker, MD, Jean Paul Couetil, MD, Patrick Perier, MD, P. Dervanian, MD, Sylvain Chauvaud, MD, and Alain Carpentier, MD, PhD	
Management of Ventricular Septal Defect With Associated Aortic Incompetence	70
J. F. Hitchcock, MD, W. J. L. Suijker, MD, E. Ksiezycka, MD, E. Harinck, MD, G. J. van Mill, MD, W. Ruzyllo, MD, F. Borman, MS, and E. J. Meijboom, MD	
Prevention of Retrovirus Infection After Injury With Contaminated Instruments: An Experimental Study	74
Francis Robicsek, MD, G. Duke Duncan, PhD, John W. Black, PhD, Thomas N. Masters, PhD, Steven A. Robicsek, PhD, and Harold E. Rice, RT	
Experimental Model of Left Ventricular Failure	78
Russell W. J. Millner, MBBS, FRCS, Jessica M. Mann, MD, Ian Pearson, AIAT, and John R. Pepper, MChir, FRCS	
Influence of Type of Prosthesis on Late Results After Combined Mitral-Aortic Valve Replacement	84
Uberto Bortolotti, MD, Aldo Milano, MD, Luca Testolin, MD, Vincenzo Tursi, MD, Alessandro Mazzucco, MD, and Vincenzo Gallucci, MD	
Formation of C5a During Cardiopulmonary Bypass: Inhibition by Precoating With Heparin	92
Tom Eirik Mollnes, MD, PhD, Vibeke Videm, MD, PhD, Otto Götze, MD, PhD, Morten Harboe, MD, PhD, and Martin Oppermann, MD	
Emergency Esophagogastrectomy for Treatment of Hydrochloric Acid Injury	98
Örs P. Horváth, MD, Tibor Oláh, MD, and Gabriella Zentai, MD	
Functional Results of Muscle Flap Closure for Sternal Infection	102
Leslie J. Kohman, MD, J. Howland Auchincloss, MD, Robert Gilbert, MD, and Mazen Beshara, MD	
Pneumocystis carinii Pneumonia After Heart Transplantation	107
Hideaki Saigenji, MD, Mitsunori Kaneko, MD, Birger Rhenmen, MD, Richard J. Williams, MD, M. Andre Vasu, MD, Timothy B. Icenogle, MD, and Jack G. Copeland, MD	

Pediatric Heart Transplantation for Congenital Heart Disease and Cardiomyopathy F. W. Hehrlein, MD, H. Netz, MD, R. Moosdorf, MD, F. Dapper, MD, H. H. Scheld, MD, J. Bauer, MD, and J. Boldt, MD	112
Transvenous Pacemakers in Children: Relation of Lead Length to Anticipated Growth Ali Gheissari, MD, Allan J. Hordof, MD, and Henry M. Spotnitz, MD	118
Multiple Pulmonary Microemboli Complicating Pneumonectomy Christopher M. R. Satur, FRCS, Roderick H. Robertson, FRCR, Philip E. Da Costa, MRCPath, Nigel R. Saunders, FRCS, and Duncan R. Walker, FRCS	122
Influence of Allopurinol on Cardiac Complications in Open Heart Operations Moheb A. Rashid, MD, and Göran William-Olsson, MD Casa Pararts	127
Case Reports Successful Repair of a Rare Type of Total Anomalous Pulmonary Venous Drainage	131
Michihiko Matsui, MD, Tatsuta Arai, MD, Shigeki Horikoshi, MD, Yohichi Sugita, MD, Kazuhiro Hashimoto, MD, Kiyozo Morita, MD, and Yoshihiko Mochizuki, MD	151
Intrathoracic Goiter: Approaching the Posterior Mediastinal Mass	134
Rodney J. Landreneau, MD, Weerachai Nawarawong, MD, Theresa M. Boley, RN, Joel A. Johnson, MD, and Jack J. Curtis, MD	
Intraoperative Transesophageal Echocardiography for Pulmonary Embolectomy Without Cardiopulmonary Bypass	137
Ph. Deleuze, MD, M. Saada, MD, R. De Paulis, MD, L. Brochard, MD, J. P. Mazzucotelli, MD, N. Rotman, MD, D. Y. Loisance, MD, and J. P. Cachera, MD	
Mediastinal Emphysema Secondary to Dental Restoration	139
F. Hammond Cole, Jr, MD, Francis H. Cole, MD, and Hugh K. Duckworth, MD	
Internal Mammary Artery to Lung Parenchyma Fistula After Aortocoronary Bypass Grafting	141
Carlos Blanche, MD, Neal Eigler, MD, and C. Noel Bairey, MD	
Traumatic Ventricular Septal Defect and Disruption of the Descending Thoracic Aorta	143
Paul S. Brown, Jr, MD, Rahul Nath, MD, Timothy Votapka, MD, Mark Slaughter, MD, Sheridan N. Meyers, MD, James V. Talano, MD, and Axel Joob, MD	
Assessing the Feasibility of Bronchoplastic Surgery With Magnetic Resonance Imaging	145
Kenneth A. Kesler, MD, Dewey J. Conces, Jr, MD, David A. Heimansohn, MD, and Praveen Mathur, MD	
Permanent Transfemoral Pacemaker Insertion After Repair of Congenital Heart Disease	148
Glenn W. Laub, MD, A. H. Olivencia-Yurvati, DO, S. Muralidharan, MD, Dryden Morse, MD, Samuel B. Pollock, MD, Mark Adkins, MD, and Lynn B. McGrath, MD	

How to Do It	
New Method for Dealing With Late-Presenting Spontaneous Esophageal Ruptures	151
C. J. McNamee, MD, B. Meyns, MD, and K. M. Pagliero, MD	
Technique of Aortic Valve Replacement With a Homograft: Orthotopic Replacement	154
Donald Ross, FRCS	
Modified Technique of Internal Mammary Artery Harvest	157
L. C. H. John, FRCS, S. J. Edmondson, FRCS, and G. M. Rees, FRCS	
Classics in Thoracic Surgery	
Surgical Management of Esophageal Reflux and Hiatal Hernia	159
Clement A. Hiebert, MD	
Current Review	
Mechanical Cardiac Valvular Prostheses	161
Cary W. Akins, MD	
Key References	
Left Ventricular Aneurysm	173
Fred A. Crawford, Jr, MD	
Correspondence	
Thymoma	175
M. E. Ribet, MD	
Reply	
Giuliano Maggi, MD, and Enrico Ruffini, MD	
Mitral Valve Replacement by Twin Starr Prostheses	176
J. Jourdan, J. Teboul, J. M. Grinda, and Ch. Isetta	
Review of Recent Books	
Review of Management of Cardiothoracic Trauma, edited by Stephen Z. Turney, Aurelio Rodriguez, and R. Adams Cowley	69
Flavian M. Lupinetti, MD	
Angiocardiography in Congenital Heart Malformations, by Benigno Soto, MD, and Albert D. Pacifico, MD	150
John H. Calhoon, MD	

Atlas of Pulmonary Surgical Pathology, by Thomas V. Colby, MD, Charles Lombard, MD, Samuel A. Yousem, MD, and Masanori Kitaichi, M	153 D
Cynthia A. Zamora, MD	
Regional Anesthesia, Second Edition, by DrMed M. Cenz, DrMed W. Hoers DrMed Chr. Niesel, and DrMed H. Kreuscher, translated by Thomas J. Dek	
Charles B. Hantler, MD	
Announcements	(9) (9) (1)
Information for Authors	A-21, 22
Guidelines for the Submission of Electronic Manuscripts	A-23
Forthcoming Articles	A-25
The Richard J. Bing Award for Young Investigators	45
Statement on the Use of Animals in Research	58
Notice From the American Board of Thoracic Surgery	130, 140
Notice From the Southern Thoracic Surgical Association	136
Correction	176
Call for Abstracts, The Society of Thoracic Surgeons	A-27, 28
Information About Membership in The Society of Thoracic Surgeons	A-29
Events of Interest	A-30, 31
Classified Advertisements	A-32, 33, 34
Index to Advertisers	A-35
Number 2 August 1991	
Editorials	
Graduate Education in Thoracic Surgery	177
Benson R. Wilcox, MD	
Pulmonary Metastases Revisited	178
Darroch W. O. Moores, MD	
Bio-Medicus Ventricular Assistance	180
George P. Noon, MD	

0	
Original	Articles

Effects of Internal Mammary Artery Dissection on Phrenic Nerve Perfusion and Function	182
James W. O'Brien, MD, Scott H. Johnson, MD, Scott J. VanSteyn, MD, Damian M. Craig, BS, Robbin E. Sharpe, BA, Michael C. Mauney, MD, and Peter K. Smith, MD	
Total Cavopulmonary Anastomosis Versus Conventional Modified Fontan Procedure	189
Jeffrey M. Pearl, MD, Hillel Laks, MD, Darryl G. Stein, MD, Davis C. Drinkwater, MD, Barbara L. George, MD, and Roberta G. Williams, MD	
Reoperative Pulmonary Resection in Patients With Metastatic Soft Tissue Sarcoma	197
Helen W. Pogrebniak, MD, Jack A. Roth, MD, Seth M. Steinberg, PhD, Steven A. Rosenberg, MD, PhD, and Harvey I. Pass, MD	
Improved Survival After Resection of Pulmonary Metastases From Malignant Melanoma	204
Lyall A. Gorenstein, MD, Joe B. Putnam, Jr, MD, Giri Natarajan, MA, Charles A. Balch, MD, and Jack A. Roth, MD	
Cardiac Transplantation With Corticosteroid-Free Immunosuppression: Long-Term Results	211
K. Francis Lee, MD, Janet D. Pierce, PhD, Michael L. Hess, MD, Andrea K. Hastillo, MD, Andrew S. Wechsler, MD, and Albert J. Guerraty, MD	
Current Indications, Risks, and Outcome After Pericardiectomy	219
Patrick A. DeValeria, MD, William A. Baumgartner, MD, Alfred S. Casale, MD, Peter S. Greene, MD, Duke E. Cameron, MD, Timothy J. Gardner, MD, Vincent L. Gott, MD, Levi Watkins, Jr, MD, and Bruce A. Reitz, MD	
Internal Mammary Artery Graft at Reoperation: Risks, Benefits, and Methods of Preservation	225
William H. Coltharp, MD, Michael D. Decker, MD, John W. Lea IV, MD, Michael R. Petracek, MD, David M. Glassford, Jr, MD, Clarence S. Thomas, Jr, MD, George R. Burrus, MD, William C. Alford, MD, and William S. Stoney, MD	
Bio-Medicus Ventricular Assist Device for Salvage of Cardiac Surgical Patients	230
Duncan A. Killen, MD, Jeffrey M. Piehler, MD, A. Michael Borkon, MD, and William A. Reed, MD	
Aortic Valve Replacement With Omniscience and Omnicarbon Valves	236
Teruhisa Kazui, MD, Osamu Yamada, MD, Makoto Yamagishi, MD, Noriyasu Watanabe, MD, and Sakuzo Komatsu, MD	
Preliminary Results of Left Heart Bypass in Pigs Using a Heparin-Coated Centrifugal Pump	245
C. Campanella, MD, FRCSEd, E. Cameron, FRCSEd, C. Sinclair, FFARCS, V. L. Feilberg, MD, C. Hider, FFARCS, S. Prasad, FRCSEd, F. Boulton, MD, FRCPath, and D. Lamb, FRCPath	

Preoperative Hemostatic Activity and Excessive Bleeding After Cardiopulmonary Bypass	250
C. P. Ratnatunga, FRCS, G. M. Rees, MS, FRCP, FRCS, and I. B. Kovacs, MD, PhD, FRCPath	
Role of Basic Fibroblast Growth Factor in Revascularization of Rabbit Tracheal Autografts	258
V. M. Olech, BSc, S. H. Keshavjee, MD, D. W. Chamberlain, MD, A. S. Slutsky, MD, and G. A. Patterson, MD	
Current Status of Coronary Artery Operation in Septuagenarians	265
Fred H. Edwards, MD, Allen J. Taylor, MD, Lenardo Thompson, MD, Kevin M. Rogan, MD, A. Thomas Pezzella, MD, J. Robert Burge, MS, and Norman Hetzler, MD	
Survival and Valve Failure After Aortic Valve Replacement	270
Kevin H. Teoh, MD, Richard D. Weisel, MD, Joan Ivanov, RN, and Susan A. Slattery	
Regional Myocardial Stress Distribution From Magnetic Resonance Image-Based Mathematical Models	276
John S. Pirolo, MD, Lawrence L. Creswell, MD, Stephen J. Bresina, MS, William H. Perman, PhD, Barna A. Szabo, PhD, Kent W. Myers, MS, Michael W. Vannier, MD, and Michael K. Pasque, MD	
Extracardiac Valved Conduits in the Pulmonary Circuit	285
Shunji Sano, MD, PhD, Tom R. Karl, MS, MD, and Roger B. B. Mee, MB, ChB, FRACS	
Case Reports	
Mesenchymoma of the Chest Wall in Children	291
Matti Eskelinen, MD, PhD, Veli-Matti Kosma, MD, PhD, and Jyrki Vainio, MD, PhD	
Neonatal Pneumonectomy for Isolated Unilateral Pulmonary Artery Agenesis	294
Charles C. Canver, MD, John D. Pigott, MD, and Robert M. Mentzer, Jr, MD	

Role of Echocardiography/Doppler in Cardiogenic Shock: Silent Mitral Regurgitation	296
Anthony P. Goldman, MD, Matthew U. Glover, MD, Wilbert Mick, RDMS, Dennis F. Pupello, MD, Stephen P. Hiro, MD, Enrique Lopez-Cuenca, MD, and Benedict S. Maniscalco, MD	
Dennis F. Pupello, MD, Stephen P. Hiro, MD, Enrique Lopez-Cuenca, MD, and	300
Dennis F. Pupello, MD, Stephen P. Hiro, MD, Enrique Lopez-Cuenca, MD, and Benedict S. Maniscalco, MD Single-Lung Transplantation With Atrial Septal Defect Repair for Eisenmenger's	300
Dennis F. Pupello, MD, Stephen P. Hiro, MD, Enrique Lopez-Cuenca, MD, and Benedict S. Maniscalco, MD Single-Lung Transplantation With Atrial Septal Defect Repair for Eisenmenger's Syndrome Patrick M. McCarthy, MD, Eliot R. Rosenkranz, MD, Richard D. White, MD,	300 304

Thoracoscopic Diagnosis and Treatment of Chylothorax After Pneumonectomy	306
Toshizumi Shirai, MD, Jun Amano, MD, and Kazuhiko Takabe, MD	
Long-Term Bridge to Transplantation With the Symbion Acute Ventricular Assist Device System	308
Scott Lick, MD, Jack G. Copeland, MD, Luis J. Rosado, MD, Gulshan Sethi, MD, Richard G. Smith, MSEE, and Marilyn Cleavinger, MSBME	
Pulmonary Origin of Left Anterior Descending Coronary Artery in Tetralogy of Fallot	310
Masahiro Yamaguchi, MD, Takuro Tsukube, MD, Yuhei Hosokawa, MD, Hidetaka Ohashi, MD, and Yoshihiro Oshima, MD	
Removal of Massive Right Atrial Thrombus Guided by Transesophageal Echocardiography	313
William L. Holman, MD, Cecil H. Coghlan, MD, Mary R. Dodson, MD, Raj Balal, MD, and Navin C. Nanda, MD	
How to Do It	
Videothoracoscopic Ligation of Bulla and Pleurectomy for Spontaneous Pneumothorax	316
Leslie K. Nathanson, FRACS, Sami M. Shimi, FRCS, Robert A. B. Wood, FRCS, and Alfred Cuschieri, FRCS	
Integrated Pump Switch for Antegrade/Retrograde Cardioplegia	320
Floyd D. Loop, MD, Robert Foster, BA, CCP, David Ogella, BS, CCP, and Donna Teplitsky	
Doppler Miniprobe to Measure Arterial Graft Flow in Coronary Artery Bypass Grafting	322
Tetsuro Takayama, MD, Hisayoshi Suma, MD, Yasuhiko Wanibuchi, MD, Shoichi Furuta, MD, Eiichi Tohda, MD, Shoichi Yamashita, MD, and Toshiyuki Matsunaka, PhD	
A New Balanced Operation for Complex Gastroesophageal Reflux Disease	325
Rodney J. Landreneau, MD, John B. Marshall, MD, Joel A. Johnson, MD, Theresa M. Boley, RN, MSN, Stephen R. Hazelrigg, MD, Jack J. Curtis, MD, and Robert N. McClelland, MD	
Classics in Thoracic Surgery	
Leonardo da Vinci and the Sinuses of Valsalva	328
Francis Robicsek, MD	
Current Review	
Achalasia: Current Evaluation and Therapy	336

X

Mark K. Ferguson, MD

Report	
Notes From the Thoracic Surgery Directors Association	343
Correspondence	
Palliative Reconstruction of Right Ventricular Outflow Tract in Tetralogy	344
S. K. Nair, MS, MCh, C. G. Venkitachalam, MD, DM, and M. S. Valiathan, ChM, FRCS	
Reply	
Yutaka Okita, MD, and Shigehito Miki, MD	
Cooling Jacket Modifications	345
Lawrence I. Bonchek, MD	
Blood Versus Oxygenated Crystalloid Cardioplegia	345
Franklin Rosenfeldt, FRACS, and Andrew Cochrane, FRACS	
Epicardial Lead Failure Due to Dense Scarring: A Solution	346
Paul H. Rosenberg, MD, Ana G. Oramas, Roy L. Nelson, MD, Michael H. Hall, MD, and Anthony J. Tortolani, MD	
Interim Meeting	
The Society of Thoracic Surgeons, Symposium on Health Care	351
Opening Remarks and Welcome	352
W. Gerald Rainer, MD	
Opening Remarks	353
Richard P. Anderson, MD	
I. Medico-Legal Session	
The Society of Thoracic Surgeons Professional Liability Survey, 1988–1989	354
Thomas D. Bartley, MD	
American Medical Association/Specialty Society Medical Liability Project	356
James S. Todd, MD	
Medical Injury Compensation Reform Act	360
Winfield J. Wells, MD	
Professional Liability: How a Trial Lawyer Prepares a Medical Malpractice Case for Trial	362

Joseph D. Jamail

Deborah K. Rasch, MD

II. Health Care in America	
Introduction	365
Richard P. Anderson, MD	
Health Care 1990—A Consumer Perspective	366
Robert E. McGarrah, Jr	
The Brave New World of Health Care	369
Richard D. Lamm	
The Perspective of the Industry	385
Austin Ross	
III. Physician Reimbursement	
Medicare: The Canadian Experience	390
Hugh E. Scully, MD	
RBRVS Report: Activities of the Ad Hoc Committee for Physicians' Reimbursement	397
George E. Miller, Jr, MD	
Results From the Cardiothoracic and Vascular Surgery Work Survey by Abt Associates Inc	403
Monica Noether, PhD	
Physician Payment Reform: Update on Implications for Cardiac Surgery	408
Glenn R. Markus	
Address by the Secretary of Health and Human Services	410
Louis W. Sullivan, MD	
IV. Workshops	
The Society of Thoracic Surgeons Coding Workshop: Results and Conclusions	413
Sidney Levitsky, MD, and Jeanne T. Fitzgerald, MA	
Report of the First Presentation of the National Database	414
Richard E. Clark, MD	
Review of Recent Books	
Current Therapy in Vascular Surgery, 2nd Edition, edited by Calvin B. Ernst and James C. Stanley	264
H. D. Root, MD	
The Pediatric Airway, by H. Biemann Othersen, Jr, MD	284

Current Therapy in Cardiovascular Disease, 3rd Edition, edited by J. Willis	Hurst, MD 321
V. C. Smith, MD	
Complications in Cardiothoracic Surgery, edited by John A. Waldhausen, Mark B. Orringer, MD	MD, and 335
John H. Calhoon, MD	
Announcements	
Forthcoming Articles	A-22
Information for Authors	A-23, 24
Guidelines for the Submission of Electronic Manuscripts	A-25
Statement on the Use of Animals in Research	229
Notice From the Southern Thoracic Surgical Association	244
Notice From the American Board of Thoracic Surgery	299, 315
Circulatory Support 1991	348
Call for Abstracts, The Society of Thoracic Surgeons	A-31, 32
Information About Membership in The Society of Thoracic Surgeons	A-33
Events of Interest	A-34, 35
Classified Advertisements	A-36, 37, 38
Index to Advertisers	A-42
Number 3 September 1991 Editorials	
Arterial Switch for Palliation of Subaortic Stenosis in Single Ventricle and T No Mean Feat!	ransposition: 415
Robert M. Freedom, MD, FRCP(C), and George A. Trusler, MD, FRCS(C)	
Assessing the Effect of Cardiopulmonary Bypass on the Brain	417
William J. Greeley, MD, and Ross M. Ungerleider, MD	
Original Articles	
Operations for Subaortic Stenosis in Univentricular Hearts	420
Tom R. Karl, MS, MD, Kevin G. Watterson, FRACS, Shunji Sano, MD, PhD, a Roger B. B. Mee, ChB, FRACS	and

Use of the Inferior Epigastric Artery as a Free Graft for Myocardial Revascularization	429
Hendrick B. Barner, MD, Keith S. Naunheim, MD, Andrew C. Fiore, MD, Vernon W. Fischer, PhD, and Howard H. Harris, MD	
Bilateral Sequential Lung Transplantation: The Procedure of Choice for Double-Lung Replacement	438
Larry R. Kaiser, MD, Michael K. Pasque, MD, Elbert P. Trulock, MD, Donald E. Low, MD, Carolyn M. Dresler, MD, and Joel D. Cooper, MD	
Indications and Limitations of Aortic Valve Reconstruction	447
Carlos Duran, MD, PhD, Naresh Kumar, MD, FRCS, Begonia Gometza, MD, and Zohair Al Halees, MD, FRCS(C)	
Warm Heart Surgery and Results of Operation for Recent Myocardial Infarction	455
Samuel V. Lichtenstein, MD, PhD, James G. Abel, MD, and Tomas A. Salerno, MD	
Current Treatment for Wolff-Parkinson-White Syndrome: Results and Surgical Implications	461
Steven F. Bolling, MD, Fred Morady, MD, Hugh Calkins, MD, Alan Kadish, MD, Michael de Buitleir, MD, Jonathan Langberg, MD, Macdonald Dick, MD, Flavian M. Lupinetti, MD, and Edward L. Bove, MD	
DNA Ploidy Patterns of Tumors Diagnosed as Metachronous or Recurrent Lung Cancers	469
Yukito Ichinose, MD, Nobuyuki Hara, MD, Mitsuo Ohta, MD, Tomoharu Kuda, MD, Hiroshi Asoh, MD, and Hideki Chikama, MD	
Acute Postinfarction Septal Rupture: Long-Term Results	474
Daniel Y. Loisance, MD, Jean M. Lordez, MD, Philippe H. Deleuze, MD, Jean-Luc Dubois-Rande, MD, David Lellouche, MD, and Jean-Paul Cachera, MD	
Cerebral Perfusion During Canine Hypothermic Cardiopulmonary Bypass: Effect of Arterial Carbon Dioxide Tension	479
William E. Johnston, MD, Jakob Vinten-Johansen, PhD, Douglas S. DeWitt, PhD, W. Keith O'Steen, PhD, David A. Stump, PhD, and Donald S. Prough, MD	
The Healing Sternum: A Comparison of Osseous Healing With Wire Versus Rigid Fixation	490
Larry A. Sargent, MD, Alan E. Seyfer, MD, Jeffery Hollinger, DDS, PhD, Roger M. Hinson, and Geoffrey M. Graeber, MD	
Effect of a Cyclic Adenosine Monophosphate Phosphodiesterase Inhibitor, DN-9693, on Myocardial Reperfusion Injury	495
Chen Chang-Chun, MD, Hikaru Matsuda, MD, Yoshiki Sawa, MD, Mitsunori Kaneko, MD, Nobuo Sakagoshi, MD, Motonobu Nishimura, MD, Tohru Kuratani, MD, Akira Amemiya, MD, and Yasunaru Kawashima, MD	
Conventional Blood Conservation Techniques in 500 Consecutive Coronary Artery Bypass Operations	500
Eivind Øvrum, MD, Einfrid Åm Holen, MD, Michel Abdelnoor, PhD, and Rolf Øystese, CP	

Treatment of Cardiogenic Shock With the Hemopump Left Ventricular Assist Device	506
Richard K. Wampler, MD, O. Howard Frazier, MD, Allan M. Lansing, MD, PhD, Richard W. Smalling, MD, PhD, John M. Nicklas, MD, Steven J. Phillips, MD, Robert A. Guyton, MD, and Leonard A. R. Golding, MD	
Sepsis After Coronary Bypass Grafting: Evidence for Loss of the Gut Mucosal Barrier	514
Edward G. Ford, MD, Clinton E. Baisden, MD, Michael L. Matteson, BS, and Anthony L. Picone, MD	
Early Postoperative Sternal Approximation After ITA Harvesting: Computed Tomographic Evaluation	518
Ph. Vanleeuw, MD, D. Roux, MD, G. Fournial, MD, Ph. Dalous, MD, Y. Glock, MD, P. Puel, MD, F. Joffre, MD, and H. Rousseau, MD	
High Potassium Contents in Organ Preservation Solutions Cause Strong Pulmonary Vasocontraction	523
Per Ola Kimblad, MD, Trygve Sjöberg, PhD, Giorgio Massa, MD, Jan-Otto Solem, MD, PhD, and Stig Steen, MD, PhD	
Prophylaxis of Atrial Fibrillation With Magnesium Sulfate After Coronary Artery Bypass Grafting	529
William J. Fanning, MD, Clarence S. Thomas, Jr, MD, Albert Roach, PharmD, Richard Tomichek, MD, William C. Alford, MD, and William S. Stoney, Jr, MD	
Bezold-Jarisch Reflex in Postoperative Pediatric Cardiac Surgical Patients	534
David A. Fullerton, MD, John A. St. Cyr, MD, PhD, David R. Clarke, MD, David N. Campbell, MD, Warren H. Toews, MD, and W. Mike See, MD	
Combined Thoracic Aortic Dissection and Abdominal Aortic Fusiform Aneurysm	537
Charles Stewart Roberts, MD, and William Clifford Roberts, MD	
Case Reports	
Complement Activation During Bypass in Acquired C1 Esterase Inhibitor Deficiency	541
Robert S. Bonser, MRCP, FRCS(C/Th), Jitendra Dave, FIMLS, John Morgan, MRCP, Cliff Morgan, FFARCS, Edward Davies, FIMLS, Paul Taylor, FIMLS, Harold Gaya, FRCPath, Lindsay John, FRCS, Matthias Paneth, FRCS, and Diego Vergani, MD	
Bidirectional Cavopulmonary Anastomosis Using Vertical Vein for Right Isomerism, Pulmonary Atresia, and TAPVR	544
Yutaka Okita, MD, Shigehito Miki, MD, Tokio Tamura, MD, Kenji Kusuhara, MD, Yuichi Ueda, MD, Takafumi Tahata, MD, Kazuo Yamanaka, MD, Yoshihide Mitani, MD, and Masamichi Tamura, MD	
Large Mediastinal Mass Secondary to an Aortocoronary Saphenous Vein Bypass Graft Aneurysm	547
David A. Forster, DO, and Michael S. Haupert, DO	

Successful Combined Operation for Takayasu's Arteritis	549
Kazuhiko Kuwahara, MD, Hitoshi Ohteki, MD, Tsuyoshi Itoh, MD, Kouzou Naitoh, MD, Koujirou Furukawa, MD, and Masafumi Natsuaki, MD	
Long-Term Function in University of Cape Town Prostheses in the Tricuspid Position	552
I. F. Galvin, FRCSI, N. J. Buckels, FRCS, N. P. Campbell, MD, MRCP, and J. Cleland, FRCS	
Schwannoma of the Brachial Plexus Mimicking an Apical Lung Tumor	555
John Horowitz, MD, David G. Kline, MD, and Steven M. Keller, MD	
Pericardial Mass Mimicking Constrictive Pericarditis	557
Wolfgang H. Hartl, MD, Eckart Kreuzer, MD, Elisabeth Reuschel-Janetschek, MD, Dorothea Schmidt, MD, and Bruno Reichart, MD	
Perfusion Without Systemic Heparinization for Rewarming in Accidental Hypothermia	560
L. K. von Segesser, MD, E. Garcia, BA, and M. Turina, MD	
Peritoneopericardial Diaphragmatic Hernia Discovered at Coronary Bypass Operation	562
Randy Kessler, MD, Stuart Pett, MD, and Jorge Wernly, MD	
How to Do It	
Optimal Visualization of Coronary Artery Anastomoses by Gas Jet	564
Kevin H. T. Teoh, MD, Anthony L. Panos, MD, Athanasios A. Harmantas, MD, Samuel V. Lichtenstein, MD, PhD, and Tomas A. Salerno, MD	
Myocardium-Sparing Cannulation Technique for Left Ventricular Assist Device Support	565
J. Michael Duncan, MD, Robert T. Baldwin, MD, Stephen R. Igo, and O. H. Frazier, MD	
Preoperative Duplex Scan Assessment of the Inferior Epigastric Artery as a Coronary Bypass Conduit	567
Eli Milgalter, MD, Hillel Laks, MD, Amir Elami, MD, Henry Louie, MD, Lester Permut, MD, and J. Dennis Baker, MD	
Resternotomy in Patients With Valved Conduits Adherent to the Sternum	569
Serafin Y. DeLeon, MD, Michel N. Ilbawi, MD, Kate Tubeszewski, MSN, William R. Wilson, Jr, MD, Jose A. Quinones, MD, David A. Roberson, MD, and Rabi F. Sulayman, MD	
Classics in Thoracic Surgery	
Surgical Cure of Cardiac Arrhythmia	572
John H. Lemmer, Jr, MD	
Current Review	
Cystic and Bullous Lung Disease	576

Correspondence	
Balloon Angioplasty of Aortic Coarctation Tsung O. Cheng, MD	581
Reply Jacques A. M. van Son, MD, PhD, Otto Daniëls, MD, and Leon K. Lacquet, MD	
	F04
Unusual Complication of J Wire Used for Central Venous Cannulation	581
Anthony L. Panos, MD, Andrew A. Common, MD, and Tomas A. Salerno, MD	
Hydrostatic Dilation of Arterial Conduits	582
Jacques A. M. van Son, MD, PhD	
Aortic Vent Efficiency	583
William I. Brenner, MD	
Reply	
Jan van der Linden, MD, and Henrik Casimir-Ahn, MD	
Role of Thoracoplasty in the Treatment of Chronic Empyema	584
Alfred Jaretzki III, MD	
Reply	
Peter C. Pairolero, MD, and Victor F. Trastek, MD	
Reply	
Kamal A. Mansour, MD	
Diuresis in Hemodynamically Compromised Patients	585
Sandeep T. Honnekeri, MCh, DNB, and Anil G. Tendolkar, MS, MS	
Reply	
James A. Magovern, MD	
CONGENITAL HEART SURGERY SYMPOSIUM	
Current Controversies and Techniques in Congenital Heart Surgery	591
Introduction	592
Anthony L. Moulton, MD	
I. Coarctation and Interrupted Aortic Arch	
Surgical Correction of Coarctation in Early Infancy: Does Surgical Technique Influence the Result?	594
Bruno J. Messmer, MD, Carmine Minale, MD, Eberhard Mühler, MD, and	

Götz v. Bernuth, MD

Coarctation: Do We Need to Resect Ductal Tissue? Richard A. Jonas, MD	604
Coarctation and Hypoplasia of the Aortic Arch: Will the Arch Grow? Ralph D. Siewers, MD, Jose Ettedgui, MD, Elfrede Pahl, MD, Terry Tallman, MSN, and Pedro J. del Nido, MD	608
Role of Extended Aortoplasty Related to the Definition of Coarctation of the Aorta Joseph J. Amato, MD, Ralph J. Galdieri, MD, and Joseph V. Cotroneo, MD	615
Role of Balloon Angioplasty in the Treatment of Aortic Coarctation P. Syamasundar Rao, MD, and Paramjeet S. Chopra, MD	621
Staged Repair of Interrupted Aortic Arch and Ventricular Septal Defect in Infancy Eric D. Irwin, MD, Elizabeth A. Braunlin, MD, PhD, and John E. Foker, MD, PhD	632
II. Management of the Small Aortic Root	
The Myth of the Aortic Annulus: The Anatomy of the Subaortic Outflow Tract Robert H. Anderson, MD, FRCPath, William A. Devine, BS, Siew Yen Ho, PhD, Audrey Smith, PhD, and Roxane McKay, MD, FRCS	640
Growth of the Hypoplastic Ascending Aorta After Radical Palliation Kevin Turley, MD	647
Surgical Management of Diffuse Subaortic Stenosis: An Integrated Approach Pascal R. Vouhé, MD, and Jean-Yves Neveux, MD	654
Extended Aortic Valvuloplasty: A New Approach for the Management of Congenital Valvar Aortic Stenosis Michel N. Ilbawi, MD, Serafin Y. DeLeon, MD, William R. Wilson, Jr, David A. Roberson,	663
Tarek S. Husayni, MD, Jose A. Quinones, MD, and Rene A. Arcilla, MD Extended Aortic Root Replacement With Cryopreserved Allografts: Do They Hold Up? David R. Clarke, MD	669
The Damus-Fontan Procedure	676
John J. Lamberti, MD, Richard D. Mainwaring, MD, J. Deane Waldman, MD, Lily George, MD, James W. Mathewson, MD, Robert L. Spicer, MD, and Stanley E. Kirkpatrick, MD	676
The Damus-Stansel-Kaye Procedure: Anatomical Determinants and Modifications	680
Serafin Y. DeLeon, MD, Michel N. Ilbawi, MD, Kate Tubeszewski, MSN, William R. Wilson, Jr, MD, and Farouk S. Idriss, MD	

III. Hypoplastic Left Heart Syndrome	
Hypoplastic Left Heart Syndrome	688
William I. Norwood, Jr, MD, PhD	
Intermediate Procedures After First-Stage Norwood Operation Facilitate Subsequence	uent 696
Richard A. Jonas, MD	
Transplantation After First-Stage Reconstruction for Hypoplastic Left Heart Syn	drome 701
Edward L. Bove, MD	
IV. Pediatric Heart Transplantation	
Pediatric Heart and Heart-Lung Transplantation	708
Robert E. Michler, MD, and Eric A. Rose, MD	
Heart Transplantation in Children: An International Survey	710
D. Glenn Pennington, MD, Nancy Noedel, RN, Lawrence R. McBride, MD, Keith S. Naunheim, MD, and W. Steves Ring, MD	
Pediatric Cardiac Transplantation Despite Atrial and Venous Return Anomalies	716
Claude Chartrand, MD	
Expanding Applicability of Transplantation After Multiple Prior Palliative Proce	dures 722
Alan H. Menkis, MD, F. Neil McKenzie, MD, Richard J. Novick, MD, William J. Kostuk, MD, Peter W. Pflugfelder, MD, Martin Goldbach, MD, Hershell Rosenberg, MD, and The Paediatric Heart Transplant Group	
Announcements	
Forthcoming Articles	A-24
Information for Authors	A-25, 26
Guidelines for the Submission of Electronic Manuscripts	A-27
Notice From the Southern Thoracic Surgical Association	522
Notice From the American Board of Thoracic Surgery	551, 575
The Southern Thoracic Surgical Association: Thirty-eighth Annual Meeting	586
Program for the Thirty-eighth Annual Meeting of the Southern Thoracic Surgical Association	587
ndex to Advertisers	A-32
Events of Interest	A-33, 34
Tassified Advertisements	A-35, 36, 37

Number 4 October 1991	
Editorial Board Appointment	727
Editorials	
Ultrasonic Lung Suction: Where to Next?	728
Rodney J. Landreneau, MD	
Nomenclatura Obscura: Subaortic Obstruction in Double-Inlet Left Ventricle and Related Lesions	730
Christopher Lincoln, FRCS, and Robert H. Anderson, FRCPath	
Original Articles	
Lung Cancer Model for Study of the Metastatic Process	732
William G. Hammond, MD, Raymond L. Teplitz, MD, and John R. Benfield, MD	
Multiple Reoperative Coronary Artery Bypass Grafting	738
Kevin D. Accola, MD, Joseph M. Craver, MD, William S. Weintraub, MD, Robert A. Guyton, MD, and Ellis L. Jones, MD	
Fibrin Sealant Improves Surgical Results of Type A Acute Aortic Dissections	745
J. R. Séguin, MD, JM. Frapier, MD, P. Colson, MD, and P. A. Chaptal, MD	
Inotropic Stimulation and Oxygen Consumption in a Canine Model of Dilated Cardiomyopathy	750
Cornelius M. Dyke, MD, K. Francis Lee, MD, Jitendra Parmar, MD, Rebecca J. Dignan, MD, Thomas Yeh, Jr, MD, Anwar Abd-Elfattah, PhD, and Andrew S. Wechsler, MD	
Management of Acquired Nonmalignant Tracheoesophageal Fistula	759
Douglas J. Mathisen, MD, Hermes C. Grillo, MD, John C. Wain, MD, and Alan D. Hilgenberg, MD	
Angioscopic Evaluation of Intravascular Morphology After Coronary Endarterectomy	766
Bruce E. Keogh, MD, FRCS, Benjamin P. Bidstrup, FRACS, FRCS, Kenneth M. Taylor, MD, FRCS, and Ralph N. Sapsford, ChM, FRCS	
Multiple Primary Lung Carcinomas: Prognosis and Treatment	773
Todd K. Rosengart, MD, Nael Martini, MD, Pierre Ghosn, MD, and Michael Burt, MD, PhD	
Repair of Truncus Arteriosus in Infancy	780
Jeffrey M. Pearl, MD, Hillel Laks, MD, Davis C. Drinkwater, Jr, MD, Eli Milgalter, MD, Orrin-Ailloni-Charas, BS, Frank Giacobetti, BS, Barbara George, MD, and Roberta Williams, MD	

Ultrasonic Surgical Aspirator for Lung Resection	787
Gary T. Verazin, MD, Anne-Marie Regal, MD, Joseph G. Antkowiak, MD, Zafar Parvez, MD, and Hiroshi Takita, MD	
Thyroid Hormone Changes After Cardiovascular Surgery and Clinical Implications	791
Shu-Hsun Chu, MD, Tien-Shang Huang, MD, Rong-Bin Hsu, MD, Shoei-Shen Wang, MD, and Chiu-Jung Wang, BE	
Heart Rate-Right Ventricular Stroke Volume Relation With Myocardial Revascularization	797
William E. Johnston, MD, Paul G. Robertie, MD, Louise M. Dudas, RN, Neal D. Kon, MD, and Jakob Vinten-Johansen, PhD	
Simultaneous Revascularization for Critical Coronary and Peripheral Vascular Ischemia	805
T. Carrel, MD, U. Niederhäuser, MD, M. Pasic, MD, A. Gallino, MD, L. von Segesser, MD, and M. Turina, MD	
Assessment of Retrograde Cardioplegia Distribution Using Contrast Echocardiography	810
Solomon Aronson, MD, Bryan K. Lee, MD, John R. Liddicoat, MD, Jeff G. Wiencek, BS, Stephen B. Feinstein, MD, John E. Ellis, MD, Michael F. Roizen, MD, and Robert B. Karp, MD	
Comparative Study of the Hydrodynamic Function of the CarboMedics Valve	815
M. Butterfield, MSc, J. Fisher, PhD, G. A. Davies, FRCS, and T. J. Spyt, FRCS	
Chest Wall Reconstruction With Degradable Processed Sheep Dermal Collagen in Dogs	821
Vincent J. Rudolphy, MD, Raymond Tukkie, MD, and Pieter J. Klopper, PhD	
Intraabdominal Complications After Cardiopulmonary Bypass	826
S. K. Ohri, FRCS, J. B. Desai, FRCS(CTh), J. A. R. Gaer, FRCSEd, J. B. Roussak, FRCSEd, M. Hashemi, MB, ChB, P. L. C. Smith, MRCP, FRCS, and K. M. Taylor, MD, FRCS	
Prevention of Ischemia-Reperfusion Injury by the Allergy Drug Lodoxamide Tromethamine	832
Gary L. Parenteau, MD, and Richard E. Clark, MD	
Mitral Valve Replacement: Techniques to Eliminate Myocardial Rupture and Prevent Valvular Disruption	839
Bobby J. Heath, MD, E. Taliaferro Warren, MD, and Beth Nickels, MD	
Advantages of Early Relief of Subaortic Stenosis in Single Ventricle Equivalents	842
Michel N. Ilbawi, MD, Serafin Y. DeLeon, MD, William R. Wilson, Jr, MD, Jose A. Quinones, MD, David A. Roberson, MD, Tarek S. Husayni, MD, Otto G. Thilenius, MD, PhD, and Rene A. Arcilla, MD	

Case Reports

Percutaneous Transluminal Subclavian Angioplasty in a Patient With Postoperative	850
Angina	

Glenn W. Laub, MD, S. Muralidharan, MD, Howard Naidech, MD, Javier Fernandez, MD, Mark Adkins, MD, and Lynn B. McGrath, MD

Traumatic Sinus of Valsalva Fistula	852
Jeng Wei, MD, MSD, Chung-Yi Chang, MD, and Yau-Chong Chang, MD	
Bronchial Neurofibrosarcoma Ken Kodama, MD, Osamu Doi, MD, Masahiko Higashiyama, MD, Hideoki Yokouchi, MD, and Ryuhei Tateishi, MD	855
Anatomically Corrected Malposition of the Great Arteries Jeongryul Lee, MD, Yongjin Kim, MD, Yongsoo Yun, MD, Joonryang Rho, MD, and Kyungphill Suh, MD	858
Constrictive Pericarditis From Nocardia asteroides Infection Randy Kessler, MD, Fabrizio Follis, MD, Daniel Daube, MD, and Jorge Wernly, MD	861
Repair of Mycotic Aneurysm of the Innominate Artery With Homograft Tissue Douglas Schuch, MD, and Larry Wolff, MD	863
Patent Foramen Ovale: A Cause of Hypoxemia in Patients on Left Ventricular Support Robert T. Baldwin, MD, J. Michael Duncan, MD, O. H. Frazier, MD, and Susan Wilansky, MD	865
Primary Aspergillus Osteomyelitis of the Sternum William A. Walker, MD, and James W. Pate, MD	868
Cardiac Transplantation in a Patient With a Single Ventricle and Transposition of the Great Vessels	871
Wayne E. Richenbacher, MD, Shreekanth V. Karwande, MD, Robert E. Shaddy, MD, Dale G. Renlund, MD, Michael R. Bristow, MD, John B. O'Connell, MD, and William A. Gay, Jr, MD	
How to Do It	
Dacron Mesh Wrapping to Support the Aneurysmally Dilated or Friable Ascending Aorta Eli Milgalter, MD, and Hillel Laks, MD	874
Cardiac Retractor for Coronary Bypass Operations	877
John A. Rousou, MD, Richard M. Engelman, MD, Joseph E. Flack III, MD, and David W. Deaton, MD	
Simplified Placement of Retrograde Cardioplegic Catheter Cordell H. Bahn, MD	879
Historical Vignette	
Tuberculosis, the Adirondacks, and Coming of Age for Thoracic Surgery John A. Meyer, MD	881

Current Review	
Cardiac Tumors: Clinical Experience and Surgical Results in 74 Patients	886
Albert Miralles, MD, Luis Bracamonte, MD, Halim Soncul, MD, Roberto Diaz del Castillo, MD, Rama Akhtar, MD, Valerìa Bors, MD, Alain Pavie, MD, Iradj Gandjbackhch, MD, and Christian Cabrol, MD	
Correspondence	
Spasm in Free Arterial Grafts	896
Jacques A. M. van Son, MD, PhD, and Frank Smedts, MD	
Reply	
Stig Steen, MD, PhD, and Giorgio Massa, MD	
Tricuspid and Mitral Valve Repair	897
Victor A. Jebara, MD, Christophe Acar, MD, and Alain Deloche, MD	
Poststernotomy Infections	898
Francis Robicsek, MD	
Reply	
David Browdie, MD	
Mammary Artery Grafts	899
Jack Love, DPhil, MD	
Reply	
Ivor F. Galvin, FRCSI	
Blood Saving in Jehovah's Witnesses	899
Paolo Vanelli, MD, Piero Castelli, MD, Anna Maria Condemi, MD, and Carmine Santoli, MD	
Reply	
Denton A. Cooley, MD, and Clifton T. P. Lewis, MD	
MYOCARDIAL PRESERVATION SYMPOSIUM	
Myocardial Preservation Into the 21st Century	901
Introduction	902
Richard M. Engelman, MD	702
Idenard IVI. Engeman, IVID	
I. Experimental	
Effect of pH Shifts Induced by Oxygenating Crystalloid Cardioplegic Solutions	903
U. O. von Oppell, MB, ChB, FCS(SA), L. M. King, BSc (Hons), E. F. Du Toit, MSc, P. Owen, PhD, B. Reichart, MD, and L. H. Opie, MD, PhD	

Protection of Ischemic Heart From Reperfusion Injury by Myo-Inositol Hexaphosphate, a Natural Antioxidant	908
Parinam S. Rao, PhD, Xuekun Liu, MD, Dipak K. Das, PhD, Gerald S. Weinstein, MD, and Denis H. Tyras, MD	
Continuous Versus Intermittent Cardioplegia in the Presence of a Coronary Occlusion	913
Harold L. Lazar, MD, Samuel Rivers, BS, Maria Cambrils, BS, Sheilah Bernard, MD, and Richard J. Shemin, MD	
Captopril, an ACE Inhibitor, for Optimizing Reperfusion After Acute Myocardial Infarction	918
Richard M. Engelman, MD, John A. Rousou, MD, Jaisimha Iyengar, MD, and Dipak K. Das, PhD	
Harmful Effects of Inotropic Agents on Myocardial Protection	927
Hiroyoshi Komai, MD, Fumio Yamamoto, MD, Kazuhiko Tanaka, MD, Hajime Ichikawa, MD, Toshihiko Shibata, MD, Akitomo Koide, MD, Takeki Ohashi, MD, Hiroshi Yamamoto, MD, Nobuyuki Nakashima, MD, and Yasunaru Kawashima, MD	
Myocardial Protection in the Hypertrophied Right Ventricle	934
Robert James Cusimano, MD, Kassem A. Ashe, MD, Ian D. Chin, BSc, Peter Chi, BSc, James G. Abel, MD, Samuel V. Lichtenstein, MD, PhD, and Tomas A. Salerno, MD	
Efficacy of Myocardial Protection With Hypothermic Blood Cardioplegia Depends on Oxygen	939
J. Vinten-Johansen, PhD, J. Steve Julian, MD, Hideo Yokoyama, MD, William E. Johnston, MD, Tonya D. Smith, BS, D. Scott McGee, BS, and A. Robert Cordell, MD	
Myocardial Oxygen Consumption After Fibrillation in the Nonhypertrophied Porcine Ventricle	949
Irvin B. Krukenkamp, MD, and Sidney Levitsky, MD	
Relation of Myocardial Protection to Cardioplegic Solution pH: Modulation by Calcium and Magnesium	955
Gillian A. Geffin, MB, BS, Tommy R. Reynolds, MD, James S. Titus, Dennis D. O'Keefe, MD, and Willard M. Daggett, MD	
Fatty Acids Suppress Recovery of Heart Function After Hypothermic Perfusion	965
Ole D. Mjøs, MD, PhD, Kazuo Ichihara, PhD, Erik Fellenius, PhD, Truls Myrmel, MD, and James R. Neely, PhD	
Effect of Aprotinin to Improve Myocardial Viability in Myocardial Preservation Followed by Reperfusion	971
Makoto Sunamori, MD, Imad Sultan, MD, and Akio Suzuki, MD	
Effect of Cardioplegic Preservation on Intracellular Calcium Transients	979
Yasushi Kato, MD, Hajime Otani, MD, Kazuho Tanaka, MD, Yukihito Saito, MD, Michio Fukunaka, MD, and Hiroji Imamura, MD	

II. Neonatal	
Isolated, Perfused Neonatal Rat Heart Preparation for Studies of Calcium and Functions Stability	al 987
Emma Riva, MD, and David J. Hearse, DSc	
Calcium Content of St. Thomas' II Cardioplegic Solution Damages Ischemic Immature Myocardium	993
E. Jack Baker IV, MD, Gordon N. Olinger, MD, and John E. Baker, PhD	
Not All Neonatal Hearts Are Equally Protected From Ischemic Damage During Hypothermia	1000
Carin Wittnich, DVM, MSc, Andrew Maitland, MD, Walter Vincente, MD, and Tomas Salerno, MD	
III. Clinical	
Diaphragm Paralysis Following Cardiac Surgery: Role of Phrenic Nerve Cold Injury	1005
John Efthimiou, MRCP, John Butler, FRCSI, Colin Woodham, FRCR, Malcolm K. Benson, FRCP, and Stephen Westaby, FRCS	
Warm Heart Surgery: Experience With Long Cross-Clamp Times	1009
Samuel V. Lichtenstein, MD, PhD, James G. Abel, MD, Anthony Panos, MD, Arthur S. Slutsky, MD, and Tomas A. Salerno, MD	
Right Atrial Versus Aortic Root Perfusion With Blood Cardioplegia	1014
Andrew C. Fiore, MD, Keith S. Naunheim, MD, Mary E. Moskoff, RN, BSN, Scott K. Langreder, BS, and Hendrick B. Barner, MD	
V. Transplantation	
The Limits of Cardiac Preservation With University of Wisconsin Solution	1021
tephen E. Fremes, MD, Ren-Ke Li, MD, Richard D. Weisel, MD, Jonald A. G. Mickle, MD, Robert D. Furukawa, BSc, and Laura C. Tumiati, BSc	
ffects of Platelet-Activating Factor Antagonist CV-3988 in Preservation of Heart and ung for Transplantation	1026
A. K. Qayumi, MD, PhD, W. R. E. Jamieson, MD, and A. Poostizadeh, MD	
Review of Recent Books	
tlas of Esophageal Surgery, by David B. Skinner, MD; illustrations by Kathy Hirsh	857
imes L. Nielsen, MD	

Guidelines for th		
Forthcoming Arti	e Submission of Electronic Manuscripts	A-31
	cles	A-34
Notice From the	Southern Thoracic Surgical Association	867
Notice From the	American Board of Thoracic Surgery	873, 880
Corrections		900
Events of Interes		A-45, 46
Classified Advert	isements	A-47, 48, 49, 50
Index to Advertis	ers	A-54
Number 5	November 1991	
Editorials		
Damus-Stansel-K	aye Procedure: Personal Observations	1033
Gordon K. Daniel	son, MD	
Therapeutic Thora	acoscopy: New Horizons for an Established Procedure	1036
Joseph I. Miller, J	, MD	
Ralph D. Alley Le	cture	
Introduction		1038
Robert L. Replogle	e, MD	
	erican Thoracic Surgery	1039
Harry Schwartz, P	hD	
Thoracic Surgery L	Directors Association Award	
Resuscitation of I	njured Myocardium With Adenosine and Biventricular Assist	1044
	MD, James A. Magovern, MD, Race L. Kao, PhD, and rn, MD	
Original Articles		
Effect of AICD Pa	ch Electrodes on the Diastolic Pressure-Volume Curve in Pig	s 1052
oseph S. Auteri, N	MD, Valluvan Jeevanandam, MD, Mark R. Bielefeld, MD, MD, and Henry M. Spotnitz, MD	1032
Todd L. Demmy, I George J. Magover Original Articles Effect of AICD Particles Oseph S. Auteri, M	MD, James A. Magovern, MD, Race L. Kao, PhD, and rn, MD ch Electrodes on the Diastolic Pressure–Volume Curve in Piga MD, Valluvan Jeevanandam, MD, Mark R. Bielefeld, MD,	

	Extended Vertical Transatrial Septal Approach to the Mitral Valve	1058
	Gerard M. Guiraudon, MD, John G. Ofiesh, MD, and Raj Kaushik, MD	
	Recovery of Oxygen Utilization Efficiency After Global Myocardial Ischemia	1063
	Satoshi Furukawa, MD, Gerhard Kreiner, MD, Joseph E. Bavaria, MD, James T. Streicher, BSE, and L. Henry Edmunds, Jr, MD	
	Cardiopulmonary Bypass, Profound Hypothermia, and Circulatory Arrest for Neurosurgery	1069
	Mark D. Williams, MD, W. Gerald Rainer, MD, Henry G. Fieger, Jr, MD, Ives P. Murray, MD, and Mary L. Sanchez, RN, CCP	
	Surgical Options in Subaortic Stenosis Associated With Endocardial Cushion Defects	1076
	Serafin Y. DeLeon, MD, Michel N. Ilbawi, MD, William R. Wilson, Jr, MD, Rene A. Arcilla, MD, Otto G. Thilenius, MD, Saroja Bharati, MD, Maurice Lev, MD, and Farouk S. Idriss, MD	
	Partial Fontan: Advantages of an Adjustable Interatrial Communication	1084
	Hillel Laks, MD, Jeffrey M. Pearl, MD, Gary S. Haas, MD, Davis C. Drinkwater, MD, Eli Milgalter, MD, Jay M. Jarmakani, MD, Josephine Isabel-Jones, MD, Barbara L. George, MD, and Roberta G. Williams, MD	
	TNM Staging and Long-Term Follow-up After Sleeve Resection for Bronchogenic Tumors	1096
	Paul E. Van Schil, MD, Aart Brutel de la Rivière, MD, Paul J. Knaepen, MD, Henri A. van Swieten, MD, Jo J. Defauw, MD, and Jules M. van den Bosch, MD	
	Fulminant Pulmonary Embolism: Symptoms, Diagnostics, Operative Technique, and Results	1102
	Christof Schmid, MD, Stefan Zietlow, Thomas O. F. Wagner, MD, Joachim Laas, MD, and Hans G. Borst, MD	
	Surgical Management of Resistant Mycobacterial Tuberculosis and Other Mycobacterial Pulmonary Infections	1108
	Marvin Pomerantz, MD, Lorie Madsen, RN-C, Marian Goble, MD, and Michael Iseman, MD	
	A Strategy to Increase the Donor Pool: Use of Cadaver Lungs for Transplantation	1113
	Thomas M. Egan, MD, C. Jake Lambert, Jr, MD, Robert Reddick, MD, Karl S. Ulicny, Jr, MD, Blair A. Keagy, MD, and Benson R. Wilcox, MD	
1	Ambulatory Mediastinoscopy and Anterior Mediastinotomy	1122
]	Eric Vallières, MD, Arthur Pagé, MD, and Alain Verdant, MD	
1	Primary Cardiac Valve Tumors	1127
	Fred H. Edwards, MD, Douglas Hale, MD, Amram Cohen, MD, Lenardo Thompson, MD, A. Thomas Pezzella, MD, and Renu Virmani, MD	
1	Very Small Pulmonary Arteries: Central End-to-Side Shunt	1132
	Kevin G. Watterson, FRACS, James L. Wilkinson, FRCP, Tom R. Karl, MS, MD, and Roger B. B. Mee, FRACS	

Transcutaneous Iodine Absorption in Infants Undergoing Cardiac Operation	1138
I. M. Mitchell, FRCS, J. C. S. Pollock, FRCS, M. P. G. Jamieson, FRCS, K. C. Fitzpatrick, PhD, and R. W. Logan, FRCP(Glasg)	
Surgical Treatment of Supraventricular Tachycardia: Experience With 61 Patients	1141
Gennady V. Knyschov, MD, Alexander S. Stychinsky, MD, Valery P. Zalevsky, MD, Vjacheslav P. Yaroschenko, MD, and Pavel A. Almiz, MD	
Thoracoscopy in the Diagnosis and Management of Recurrent Pleural Effusions	1145
J. Hucker, FRCS, N. K. Bhatnagar, FRCS, A. N. Al-Jilaihawi, FRCS, and C. P. Forrester-Wood, FRCS	
Evaluation of the Damus-Kaye-Stansel Operation in Infancy	1148
Duccio C. di Carlo, MD, Roberto M. Di Donato, MD, Adriano Carotti, MD, Luigi Ballerini, MD, and Carlo Marcelletti, MD	
Ivor Lewis Operation for Epidermoid Carcinoma of the Esophagus	1154
P. Lozac'h, MD, P. Topart, MD, J. Etienne, MD, and J. F. Charles, MD	
Case Reports	
Propranolol for Intractable Hemolysis After Open Heart Operation	1158
Yutaka Okita, MD, Shigehito Miki, MD, Kenji Kusuhara, MD, Yuichi Ueda, MD, Takafumi Tahata, MD, and Kazuo Yamanaka, MD	
Skin Grafting for Repair of a Cardiac Laceration	1161
Robert S. D. Higgins, MD, Richard Stahl, MD, and John C. Baldwin, MD	
Partial Anomalous Pulmonary Venous Connection to the Azygos Vein With Atrial Septal Defect	1164
John C. Mullen, MD, Anees J. Razzouk, MD, William G. Williams, MD, C. A. Frederic Moës, MD, and Robert M. Freedom, MD	
Cogan's Syndrome With Aortitis, Aortic Regurgitation, and Aortic Arch Vessel Stenoses	1166
Andrew D. Cochrane, FRACS, and James Tatoulis, FRACS	
Successful Management of Aortoesophageal Fistula Due to Thoracic Aortic Aneurysm	1168
Ulrich O. von Oppell, FCS(SA), Mark de Groot, FRCS(C), Casper Thierfelder, MD, Peter Zilla, MD, PhD, and John A. Odell, FRCS(Ed)	
Blunt Traumatic Rupture of Pulmonary Vein, Left Atrium, and Bronchus	1171
Peter P. McKeown, FRACS, Alexander Rosemurgy, MD, and Patricia Conant, MS	
Massive Hemoptysis Due to Broncholithiasis	1173
Thomas R. McLean, MD, Arthur C. Beall, Jr, MD, and James W. Jones, MD, PhD	
Thoracoscopic Neodymium:Yttrium-Aluminum Garnet Laser-Assisted Pulmonary Resection	1176
Rodney J. Landreneau, MD, David B. Herlan, MD, Joel A. Johnson, MD, Theresa M. Boley, RN, MSN, Weerchai Nawarawong, MD, and Peter F. Ferson, MD	

How to Do It	
Modified Robicsek Technique for Complicated Sternal Closure	1179
Giuseppe Tavilla, MD, Jacques A. M. van Son, MD, PhD, Ad F. Verhagen, MD, and Leon K. Lacquet, MD	
Total Orthotopic Heart Transplantation: An Alternative to the Standard Technique	1181
Gilles Dreyfus, MD, Victor Jebara, MD, Sherban Mihaileanu, MD, and Alain F. Carpentier, MD, PhD	
Improved Forceps for Pulmonary Embolectomy	1185
Ludwig K. von Segesser, MD, Erwin Bauer, MD, Rolf Jenni, MD, and Marko Turina, MD	
Endarterectomy, Vein Patch, and Mammary Bypass of the Anterior Descending Artery	1187
J. S. Ladowski, MD, M. H. Schatzlein, MD, D. J. Underhill, MD, and A. C. Peterson, MD	
Classics in Thoracic Surgery	
Ross' First Homograft Replacement of the Aortic Valve	1190
Richard A. Hopkins, MD, James St. Louis, BS, and Philip C. Corcoran, MD	
Current Review	
Surfactant Analysis and Replacement Therapy: A Future Tool of the Lung Transplant Surgeon?	1194
Richard J. Novick, MD, Fred Possmayer, PhD, Rudy A. W. Veldhuizen, Alan H. Menkis, MD, and F. Neil McKenzie, MD	
Key References	
Bronchial Adenoma	1201
Harvey I. Pass, MD	
Correspondence	
Carlo A. Carlon and the Cavopulmonary Anastomosis	1204
Uberto Bortolotti, MD, Giovanni Stellin, MD, and Alessandro Mazzucco, MD	
Penetrating Cardiac Injuries	1205
David H. Spodick, MD, DSc	
Reply	
Safuh Attar, MD, and Joseph S. McLaughlin, MD	
Mammary Artery to Saphenous Vein Bypass Graft: An Alternative Method of Redo Operation	1205
Anthony L. Panos, MD, James P. Houck, MD, Robert Chisholm, MD, Samuel V. Lichtenstein, MD, and Tomas A. Salerno, MD	

Noboru Toda, MD, PhD

Surgical Treatment of Ebstein's Malformation	1206
P. Raj Behl, MS, FRCS	
Gastric Emptying After Gastric Pull-up	1207
Alan G. Casson, MD, ChB, John Powe, MD, Richard Inculet, MD, and I	
Surgical Management of Carcinoid Heart Disease	1208
Paul M. Ridker, MD, and Frederick J. Schoen, MD, PhD	
Thermodilution Catheter-Induced Endobronchial Hemorrhage With Pul Hypertension	monary 1208
Pasala S. Ravichandran, MD, Stephen P. Kelly, MD, Jeffrey S. Swanson, Cindy L. Fessler, BS, and Albert Starr, MD	MD,
Review of Recent Books	
The Foundations of Cardiac Pacing, Part I. An Illustrated Practical Guid Pacing, by Richard Sutton and Ivan Bourgeois	le to Basic 1062
James L. Nielsen, MD	
Announcements	
Forthcoming Articles	A-22
Information for Authors	A-23, 24
Guidelines for the Submission of Electronic Manuscripts	A-25
Notice From the American Board of Thoracic Surgery	1126, 1144
Events of Interest	A-33, 34
Classified Advertisements	A-35, 36, 37, 38
Index to Advertisers	A-40
Number 6 December 1991	
Editorials	
Cardioplegia: From the Bedside to the Laboratory and Back Again	1209
curatopicgia. From the beasite to the Laboratory and back Again	
Ray CJ. Chiu, MD, PhD	

es
ĺ

University of Wisconsin Solution for Human Donor Heart Preservation: Initial Clinical Experience	1213
Valluvan Jeevanandam, MD, Mark L. Barr, MD, Joseph S. Auteri, MD, Juan A. Sanchez, MD, Gary Y. Ott, MD, Felicia A. Schenkel, RN, Charles Marboe, MD, Craig R. Smith, MD, and Eric A. Rose, MD	
Improved Management of the Paget-Schroetter Syndrome Secondary to Thoracic Outlet Compression	1217
Harold C. Urschel, Jr, MD, and Maruf A. Razzuk, MD	
Malignant Esophagorespiratory Fistula: Management Options and Survival	1222
Michael Burt, MD, PhD, William Diehl, MD, Nael Martini, MD, Manjit S. Bains, MD, Robert J. Ginsberg, MD, Patricia M. McCormack, MD, and Valerie W. Rusch, MD	
Weight Is Not an Accurate Criterion for Adult Cardiac Transplant Size Matching	1230
Barry B. K. Chan, MD, Kirk J. Fleischer, MD, James D. Bergin, MD, V. Colt Peyton, MD, Terry L. Flanagan, MPH, John A. Kern, MD, Curtis G. Tribble, MD, Robert S. Gibson, MD, and Irving L. Kron, MD	
First Successful Bridge to Cardiac Transplantation Using Direct Mechanical Ventricular Actuation	1237
James E. Lowe, MD, Mark P. Anstadt, MD, Peter Van Trigt, MD, Peter K. Smith, MD, Paul J. Hendry, MD, Mark D. Plunkett, MD, and George L. Andstadt, VMD	
Mitral Valve Repair for Ischemic Mitral Insufficiency	1246
Wiliam G. Hendren, MD, James J. Nemec, MD, Bruce W. Lytle, MD, Floyd D. Loop, MD, Paul C. Taylor, MD, Robert W. Stewart, MD, and Delos M. Cosgrove III, MD	
Bronchopleural Fistula After Stapled Closure of Bronchus	1253
S. Russell Vester, MD, L. Penfield Faber, MD, C. Frederick Kittle, MD, William H. Warren, MD, and Robert J. Jensik, MD	
Bilateral Latissimus Dorsi Cardiomyoplasty	1259
James A. Magovern, MD, Anthony P. Furnary, MD, Ignacio Y. Christlieb, MD, Race L. Kao, PhD, and George J. Magovern, MD	
Results of the Fontan Procedure for Patients With Univentricular Heart	1266
Amram J. Cohen, MD, David C. Cleveland, MD, John Dyck, MD, Dolores Poppe, BS, Jeffrey Smallhorn, MD, Robert M. Freedom, MD, George A. Trusler, MD, John G. Coles, MD, C. A. Frederick Moes, MD, Ivan M. Rebeyka, MD, and William G. Williams, MD	
Main Bronchial Sleeve Resection With Pulmonary Conservation	1272
Joseph R. Newton, Jr, MD, Hermes C. Grillo, MD, and Douglas J. Mathisen, MD	
Treatment of Aortic Coarctation by Axillofemoral Bypass Grafting in the High-Risk Patient	1281
Cliff P. Connery, MD, James A. DeWeese, MD, Barry K. Eisenberg, MD, and Arthur J. Moss, MD	

Anomalous Origin of the Right Pulmonary Artery From the Ascending Aorta	1285
Yuichirou Nakamura, MD, Hisataka Yasui, MD, Hideaki Kado, MD, Kunihiro Yonenaga, MD, Yuichi Shiokawa, MD, and Shigehiko Tokunaga, MD	
Extrapleural Takedown of the Internal Mammary Artery as a Pedicle	1292
G. Noera, MD, P. M. Pensa, MD, P. Guelfi, MD, B. Biagi, MD, R. Lodi, MD, and C. Carbone, MD	
Denervation of Transplanted Porcine Lung Causes Airway Obstruction	1295
Charles E. Hobson, MD, W. Gerald Teague, MD, Curtis G. Tribble, MD, Stacey E. Mills, MD, Barry Chan, MD, Jon Agee, MD, Terry L. Flanagan, MPH, and Irving L. Kron, MD	
Cardioprotective Effects of Nucleoside Transport Inhibition in Rabbit Hearts	1300
Munetaka Masuda, MD, Ann Demeulemeester, Chen Chang-Chun, MD, Marc Hendrikx, MD, Herman Van Belle, and Willem Flameng, MD	
Transesophageal Echocardiography in Patients With Mechanical Circulatory Assistance	1306
Martin Brack, MD, Jeanne D. Olson, RDMS, Wes R. Pedersen, MD, Irvin F. Goldenberg, MD, Fredarick L. Gobel, MD, Marc R. Pritzker, MD, Robert W. Emery, MD, and Helmut W. Lange, MD	
Vascular Reactivity of Human Internal Mammary and Gastroepiploic Arteries	1310
Gregory S. O'Neil, BSc, Adrian H. Chester, BSc, Catherine J. Schyns, Samad Tadjkarimi, MD, John R. Pepper, FRCS, and Magdi H. Yacoub, FRCS	
Case Reports	
Tricuspid Valve Myxoma: A Rare Indication for Tricuspid Valve Repair	1315
Bechara El Asmar, MD, Michael Acker, MD, Jean Paul Couetil, MD, P. H. Penther, MD, and Alain Carpentier, MD, PhD	
Contralateral Pneumonectomy After Single-Lung Transplantation for Emphysema	1317
Richard J. Novick, MD, Alan H. Menkis, MD, David Sandler, MD, Avinash Garg, MD, Dildar Ahmad, MD, Sandy Williams, RN, and F. Neil McKenzie, MD	
Aprotinin Used in Emergency Coronary Operation After Streptokinase Treatment	1320
Theodore Efstratiadis, MD, PhD, Christopher Munsch, ChM, FRCS, David Crossman, MB, MRCP, and Kenneth Taylor, MD, FRCS	
Mixed Tumor of Salivary Gland Type Arising in the Bronchus	1322
Masatoshi Mori, MD, Keizo Furuya, MD, Takashi Kimura, MD, Masahiro Kitade, MD, and Nobuo Ueda, MD	
Perioperative Spinal Canal Narrowing in Patients With Down's Syndrome	1325
Serafin Y. DeLeon, MD, Michel N. Ilbawi, MD, Robert T. Egel, MD, Paul E. Miller, MD, Mounir Y. Obeid, MD, Lev Podorovsky, MD, Jose A. Quinones, MD, and Rabi F. Sulayman, MD	

1329
1331
1334
1337
1340
1342
1344
1346
1351
1354
1368

Tetralogy of Fallot	1368
Robert H. Anderson, MD, FRCPath	
Reply	
Jaroslav Stark, MD, Marc R. de Leval, MD, Martin J. Elliott, MD, and E. Snir, I	MD
Spontaneous Esophageal Rupture	1369
Gil Hauer Santos, MD	
Reply	
K. M. Pagliero, FRCS	
Retrograde Disc Escape in a Harken Mitral Valve Prosthesis 21 Years After Im	plantation 1370
Eduardo Otero-Coto, MD, PhD, Angel Silla, MD, and Juan A. Casillas, MD, Ph	ıD
Vagal Schwannoma	1370
William A. Walker, MD, and Frank E. Maguire, MD	
Reply	
Richard F. Heitmiller, MD	
Announcements	
Information for Authors	A-21, 22
Guidelines for the Submission of Electronic Manuscripts	A-23
Forthcoming Articles	A-27
Notice From the American Board of Thoracic Surgery	1339, 1345
The Society of Thoracic Surgeons: Twenty-eighth Annual Meeting	1372
Twenty-fifth Postgraduate Program, The Society of Thoracic Surgeons	1373
Program for the Twenty-eighth Annual Meeting of The Society of Thoracic Sur	rgeons 1374
Events of Interest	A-29, 30
Classified Advertisements	A-31, 32, 33
Index to Advertisers	A-36
Index to Volume 52	
Author Index	1383
Subject Index	1400

